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1	1	"20030236745"	USPAT; US-PGPUB	2004/09/16 16:47
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7	1	"20030236837"	USPAT; US-PGPUB	2004/09/16 16:47
8	1	"20020108059"	USPAT; US-PGPUB	2004/09/16 16:47
10	45	((break divid\$) with (file data information)) with (piece\$ packet\$ segment\$) and (peer adj peer)	USPAT; US-PGPUB	2004/09/16 16:47
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141 [Adapting publish/subscribe middleware to achieve Gnutella-like functionality](#)

Dennis Heimbigner

 March 2001 **Proceedings of the 2001 ACM symposium on Applied computing**

 Full text available: [pdf\(52.31 KB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)
Keywords: Gnutella, middleware, peer-to-peer, publish-subscribe

142 [Unchained value: the new logic of digital business](#)

Mary J. Cronin

 February 2001 **Ubiquity**, Volume 1 Issue 46

 Full text available: [html\(56.83 KB\)](#) Additional Information: [full citation](#), [index terms](#)

143 [Toward a model of self-administering data](#)

ByungHoon Kang, Robert Wilensky0

 January 2001 **Proceedings of the first ACM/IEEE-CS joint conference on Digital libraries**

 Full text available: [pdf\(308.08 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)


We describe a model of self-administering data. In this model, a declarative description of how a data object should behave is attached to the object, either by a user or by a data input device. A widespread infrastructure of self-administering data handlers is presumed to exist; these handlers are responsible for carrying out the specifications attached to the data. Typically, the specifications express how and to whom the data should be transferred, how it should be incorporated when it i ...

Keywords: asynchronous collaboration, data access model, data management, distributed file system, file sharing, peer to peer, scalable update propagation, self-administering data

144 [Collaboration with Lean Media: how open-source software succeeds](#)

Yutaka Yamauchi, Makoto Yokozawa, Takeshi Shinohara, Toru Ishida

December 2000 **Proceedings of the 2000 ACM conference on Computer supported cooperative work**

Full text available:  pdf(164.43 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)


Open-source software, usually created by volunteer programmers dispersed worldwide, now competes with that developed by software firms. This achievement is particularly impressive as open-source programmers rarely meet. They rely heavily on electronic media, which preclude the benefits of face-to-face contact that programmers enjoy within firms. In this paper, we describe findings that address this paradox based on observation, interviews and quantitative analyses of two open-source project ...

Keywords: CVS, cooperative work, distributed work, electronic media, innovation, open-source, software engineering

145 On proxy agents, mobility, and web access

Anupam Joshi


December 2000 **Mobile Networks and Applications**, Volume 5 Issue 4

Full text available:  pdf(201.52 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

With the emerging need for ubiquitous access to information, web access from mobile clients is gaining increasing importance. Unfortunately, the underlying protocols of the web are not designed to support operations from a resource poor platform in a low bandwidth, disconnection prone environment. Efforts to create systems to support mobile browsing have typically been proxy‐based. However, such solutions have recently been criticized due to their non‐scalability. Developments in ad ...

146 Testing Intrusion detection systems: a critique of the 1998 and 1999 DARPA intrusion detection system evaluations as performed by Lincoln Laboratory

November 2000 **ACM Transactions on Information and System Security (TISSEC)**, Volume 3 Issue 4

Full text available:  pdf(156.16 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)


In 1998 and again in 1999, the Lincoln Laboratory of MIT conducted a comparative evaluation of intrusion detection systems (IDSs) developed under DARPA funding. While this evaluation represents a significant and monumental undertaking, there are a number of issues associated with its design and execution that remain unsettled. Some methodologies used in the evaluation are questionable and may have biased its results. One problem is that the evaluators have published relatively little concern ...

Keywords: computer security, intrusion detection, receiver operating curves (ROC), software evaluation

147 Collaborative virtual environments in the year of the dragon

Samuli Pekkola, Mike Robinson, Markku-Juhani O. Saarinen, Jonni Korhonen, Saku Hujala, Tero Toivonen

September 2000 **Proceedings of the third international conference on Collaborative virtual environments**

Full text available:  pdf(248.20 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)


Three suggestions are made for extensions from and to CVE's: awareness of others, multiple media, and scalability. Awareness of others and their activities is strongly desirable in all media and applications, not just in CVE's. Multiple media are not seriously

catered for in existing CVE's, and a suitable architecture will precede popular applications. CVE's need to be scalable to greater numbers of people, and achieving th ...

Keywords: CVE, awareness, multiple media, scalability, virtual reality

148 Process migration

September 2000 **ACM Computing Surveys (CSUR)**, Volume 32 Issue 3

Full text available:  pdf(1.24 MB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)


Process migration is the act of transferring a process between two machines. It enables dynamic load distribution, fault resilience, eased system administration, and data access locality. Despite these goals and ongoing research efforts, migration has not achieved widespread use. With the increasing deployment of distributed systems in general, and distributed operating systems in particular, process migration is again receiving more attention in both research and product development. As hi ...

Keywords: distributed operating systems, distributed systems, load distribution, process migration

149 FIRE: flexible Intra-AS routing environment

Craig Partridge, Alex C. Snoeren, W. Timothy Strayer, Beverly Schwartz, Matthew Condell, Isidro Castiñeyra

August 2000 **ACM SIGCOMM Computer Communication Review , Proceedings of the conference on Applications, Technologies, Architectures, and Protocols for Computer Communication**, Volume 30 Issue 4


Full text available:  pdf(107.75 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Current routing protocols are monolithic, specifying the algorithm used to construct forwarding tables, the metric used by the algorithm (generally some form of hop-count), and the protocol used to distribute these metrics as an integrated package. The Flexible Intra-AS Routing Environment (FIRE) is a link-state, intra-domain routing protocol that decouples these components. FIRE supports run-time-programmable algorithms and metrics over a secure link-state distribution protocol. By allow ...

150 A framework for scalable global IP-anycast (GIA)

Dina Katabi, John Wroclawski

August 2000 **ACM SIGCOMM Computer Communication Review , Proceedings of the conference on Applications, Technologies, Architectures, and Protocols for Computer Communication**, Volume 30 Issue 4

Full text available:  pdf(306.33 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper proposes GIA, a scalable architecture for global IP-anycast. Existing designs for providing IP-anycast must either globally distribute routes to individual anycast groups, or confine each anycast group to a pre-configured topological region. The first approach does not scale because of excessive growth in the routing tables, whereas the second one severely limits the utility of the service. Our design scales by dividing inter-domain anycast routing into two components. The first ...

Keywords: Internet, anycast, architecture, routing, scalable

151 Chimera: hypermedia for heterogeneous software development environments

Kenneth M. Anderson, Richard N. Taylor, E. James Whitehead

July 2000 **ACM Transactions on Information Systems (TOIS)**, Volume 18 Issue 3

Full text available:  pdf(864.32 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Emerging software development environments are characterized by heterogeneity: they are composed of diverse object stores, user interfaces, and tools. This paper presents an approach for providing hypermedia services in this heterogeneous setting. Central notions of the approach include the following: anchors are established with respect to interactive views of objects, rather than the objects themselves; composable, n-ary links can be established between a ...

Keywords: heterogeneous hypermedia, hypermedia system architectures, link servers, open hypermedia systems, software development environments

152 Software engineering for mobility: a roadmap

Gruia-Catalin Roman, Gian Pietro Picco, Amy L. Murphy

May 2000 **Proceedings of the conference on The future of Software engineering**

Full text available:  pdf(2.07 MB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

153 Extending document management systems with user-specific active properties

Paul Dourish, W. Keith Edwards, Anthony LaMarca, John Lamping, Karin Petersen, Michael Salisbury, Douglas B. Terry, James Thornton

April 2000 **ACM Transactions on Information Systems (TOIS)**, Volume 18 Issue 2

Full text available:  pdf(166.43 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Document properties are a compelling infrastructure on which to develop document management applications. A property-based approach avoids many of the problems of traditional hierarchical storage mechanisms, reflects document organizations meaningful to user tasks, provides a means to integrate the perspectives of multiple individuals and groups, and does this all within a uniform interaction framework. Document properties can reflect not only categorizations of documents and document use ...

Keywords: active properties, component software, document management systems, document services, user experience

154 The Meglos user interface

Robert D. Gaglianella

November 1999 **Proceedings of 1986 ACM Fall joint computer conference**

Full text available:  pdf(1.05 MB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

155 Collaboration transparency in the DISCIPLE framework

Wen Li, Weicong Wang, Ivan Marsic

November 1999 **Proceedings of the international ACM SIGGROUP conference on Supporting group work**

Full text available:  pdf(2.04 MB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Sharing single-user software applications is a major goal of synchronous groupware particularly because the majority of applications continues to be developed for single users. We present a mechanism for sharing collaboration-transparent single-user applications in our DISCIPLE collaboration framework. DISCIPLE is the equivalent of a Web


browser that allows sharing applets (Java components, both transparent and aware of collaboration). It allows users with no programming background to quick ...

Keywords: CSCW frameworks, JavaBeans, collaboration-transparent applications, synchronous groupware

156 A component and communication model for push systems

Manfred Hauswirth, Mehdi Jazayeri

October 1999 **ACM SIGSOFT Software Engineering Notes , Proceedings of the 7th European software engineering conference held jointly with the 7th ACM SIGSOFT international symposium on Foundations of software engineering**, Volume 24 Issue 6

Full text available:  [pdf\(1.50 MB\)](#)


Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

We present a communication and component model for push systems. Surprisingly, despite the widespread use of many push services on the Internet, no such models exist. Our communication model contrasts push systems with client-server and event-based systems. Our component model provides a basis for comparison and evaluation of different push systems and their design alternatives. We compare several prominent push systems using our component model. The component model consists of producers and ...

157 Unifying documentation teams

Karl A. Hakkarainen

October 1999 **Proceedings of the 17th annual international conference on Computer documentation**

Full text available:  [pdf\(1.11 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper describes how a set of geographically and organizationally distributed documentation teams created the Rational Suite 1.0 documentation set. The paper covers the business operations of Rational Software, details the documentation tools and technologies used in the project and describes the evolution of the larger team as it learned how to work with a new software development methodology. The paper concludes with a summary of lessons learned and next steps.

Keywords: distributed teams, documentation standards, organizational development

158 The computing research repository: promoting the rapid dissemination and archiving of computer science research

Joseph Y. Halpern, Carl Lagoze

August 1999 **Proceedings of the fourth ACM conference on Digital libraries**

Full text available:  [pdf\(113.94 KB\)](#)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

159 MOCA: a service framework for mobile computing devices

James Beck, Alain Gefflaut, Nayeem Islam

August 1999 **Proceedings of the 1st ACM international workshop on Data engineering for wireless and mobile access**

Full text available:  [pdf\(911.37 KB\)](#)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

Keywords: Java, component software, mobile device, service discovery, service

framework

160 Current technological impediments to business-to-consumer electronic commerce



Gregory Rose, Huoy Khoo, Detmar W. Straub

June 1999 **Communications of the AIS**

Full text available:  [pdf\(479.36 KB\)](#) Additional Information: [full citation](#), [references](#), [citations](#)

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